DOCUMENT RESUME

ED 379 977 HE 028 078

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TITLE History of Higher Education: Curriculum.
PUB DATE 6 Dec 94
NOTE 30p.
PUB TYPE Historical Materials (060)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Classical Languages; *College Curriculum; College Instruction; Colleges; *Curriculum Development; Educational Attitudes; *Educational History; *Educational Trends; Elective Courses; General Education; *Higher Education; Land Grant Universities; Relevance (Education); *Role of Education; Theological Education; Two Year Colleges; United States History; Universities; Vocational Education

ABSTRACT

This paper reviews the history of undergraduate curriculum in the United States from the colonial period to the present, arguing that the drive for utility has been the main force shaping curricular trends. It discusses the purpose of early colonial colleges and their curricula, which emphasized Latin, Greek, Hebrew, ancient history, theology, ethics, and the natural sciences. The paper then focuses on the declining influence of theology and the classics in the 19th century, which made way for moral philosophy, economics, sociology, modern languages, medicine, law, and political science. The paper also discusses the effects of the Yale Report of 1828 (a defense of the classical curriculum), the adoption of course examinations in the mid-19th century, the creation of technical colleges, innovations in pedagogy, the creation of colleges for women and African-Americans, the rise of land grant colleges and universities, elective courses, the creation of junior colleges, vocational education, general education requirements, the Serviceman's Readjustment Act after World War II, student activism of the 1960s, consumerism, and the rise of business and engineering curriculum in recent decades. (Contains 33 references.) (MDM)

HISTORY OF HIGHER EDUCATION:

CURRICULUM

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December 6, 1994

The curriculum history of American undergraduate education has largely been a reflection of the shifting perceived needs of the society. While the curriculum, like education itself, has functioned as conservator and disseminator of what society has valued, it has continually been prodded to accommodate a fundamental trait of the American character: pragmatism. What began in 1639 as a quasi-medieval course of study to train men for the Christian ministry in a theocentric society became multiple courses of study that served professional and occupational training in an industry-driven society. The classical core of study split into parallel courses and then burst into a shower of electives held together by the major and a permissive structure of general education. As "battles" raged in college committee rooms over the classics vs. science or the liberal arts vs. vocational education, the press for utility silently charted the course for the curriculum.

The purpose of the early colonial colleges was to create centers of formal training primarily for ministers and professionals of the various Protestant sects. The curriculum, regardless of sect, rested upon a foundation of Christianity and a heritage of European culture shaped by the Renaissance and the Reformation (Tewksbury, 1965). Old World institutions were mimicked in the New but were constrained by a cultural lag and the poverty of the colonial ones (Robson, 1985). As a result, the traditional college training for the professions was for the most part taken over by the apprenticeship system, which was imminently practical, flexible, and inexpensive (Rudolph, 1962). Those students who entered college were predominantly being trained for the ministry, an early vocationalism which would remain a function of American higher education (Jencks & Riesman, 1969).

While the colonial curriculum was to satisfy other educational purposes such as the transmission of culture and advancement of knowledge, its primary role as a kind of seminary dictated the courses of study. Greek and rhetoric, for example, were required because of their particular application to a career as a clergyman. The curriculum was a combination of the medieval course of study based on the Aristotelian philosophies, the Renaissance ideal, and the missions of the Puritan Reformation (Rudolph, 1977). From the medieval universities came the liberal arts as the ancient Greeks had defined them: the quadrivium of arithmetic, geometry, astronomy, and music; the trivium of logic, grammar, and rhetoric. These basic studies prepared the student for the Aristotelian philosophies: natural (physics), moral (ethics), and mental (metaphysics) (Rudolph, 1977; Westmeyer, 1985). The Renaissance tradition was evident in humanistic studies that prepared men to be gentlemen and scholars. Training went beyond theology to the productive use of leisure and to leadership in affairs of state (Hofstadter, 1963). Courses included Greek, Hebrew, ancient history, and natural science, such as botany. The influence of the Reformation produced the central core of the young men's education; in all four years of the college course, students disputed the subjects of divinity and ethics. Every Sunday, the sermons and biblical exegesis synthesized the curriculum into a coherent whole (Rudolph, 1977; Walsh, 1935).

The sequence of courses and their length more or less followed Harvard's scheme. The first two years provided a Latin review and Greek studies, logic, Hebrew, rhetoric, and natural philosophy. The third year consisted of the Aristotelian philosophies plus geography. The fourth year added mathematics to all of the above (Rudolph, 1977). There was, however, no standardized course among the colleges. The number of years of a course of study for the

BA ranged from two years to four years. The Master's degree took three more years of studying questions of a "higher order" (Westmeyer, 1985). Partial courses were available for those who were not degree-seeking (Rudolph, 1977). It was not until 1861 that Yale offered the first three Ph. D.s. for "high attainments" in Philosophy and the Arts. By 1876, the year Johns Hopkins began the development of its Ph.D. programs, forty-four Ph. D.s were awarded at twenty-five institutions (Rudolph, 1962).

Although colleges remained committed to the classical curriculum even in the decades after the Revolution (Jencks, 1969), change in the curriculum of the colonial colleges had begun to take place much earlier as the rays of the Enlightenment stretched across the Atlantic. At Harvard the Copernican theory had already been established and the Ptolemaic system discredited by 1659. In 1714, Yale studies took on a Newtonian orientation with the delivery of a collection of over 700 books donated by Isaac Newton and prominent members of the Royal Society to the college, a result of solicitations by an agent sent to London by the college. As a means to the unlocking of Newtonian physics, algebra and geometry appeared as courses of study by 1718 (Rudolph, 1977; Westmeyer, 1985). In 1739, Yale pared its classical curriculum to make room for natural philosophy, mathematics, and the "practical" applications of surveying and navigation. Fifty years later, natural philosophy at the colonial colleges would fragment into such areas as chemistry, geography and natural history (Robson, 1985; Rudolph, 1977).

By 1788 all eight colonial colleges had professors of natural philosophy and mathematics, whose new views of nature inevitably eroded the basis of the old curriculum--truth according to Christian doctrine. What had previously been biblical exegesis now turned

to empiricism and experimentation as the process for the arrival at truth. As theology waned, ethics, a more pragmatic form of faith, became the course in moral philosophy at Harvard and Yale. That the focus had shifted away from divine revelation to the understanding of the behavior of man was also evident in the emergence of more worldly discussions in economics, sociology and political science (Robson, 1985). The influence of deism, which cast God as the indifferent watchmaker of a mechanistic universe, made the study of His Will less compelling. Through the efforts of Thomas Jefferson as a member of the board of visitors, William and Mary terminated its professorships of divinity and oriental languages in 1779 and, in so doing, religious instruction at the college. Professorships were added in public administration, modern languages, and medical science while existing professorships were expanded to include natural history, natural philosophy, natural and international law, and fine arts (Rudolph, 1977).

Instruction was radically altered to deliver the new curriculum. In the past, studies had been explored through syllogistic argumentation and deductive reasoning. Disputations were the means by which the students displayed their competence, just as at medieval universities. With the introduction of the New Learning, however, empiricism and experimentation became the mode of scientific investigation, and reasoning necessarily became inductive. The old disputation based on syllogistic exercises became obsolete (Robson, 1985; Walsh, 1935; Westmeyer, 1985). The abandonment of the syllogism as a basic form of college instruction--along with Latin as the language of discourse--signified the passing of the colonial curriculum (Rudolph, 1977).

English began to supplant Latin and Hebrew as the essential language. Its movement

to the center of studies from the periphery indicated a new interest in aesthetics (poetry) and the nature of man (history) and away from theology. These subjects had not been part of the old curriculum partly because they did not lend themselves to deduction and partly because they had been considered entertainment. Pope and Shakespeare, for example, appeared on a reading list under the heading "diversions." Not until 1771 did "belles lettres" appear in instruction at Yale, and in 1776, the senior class was allowed to receive instuction in English (Rudolph, 1977).

Science also changed the way in which education was delivered. Whereas in the past, tutors had been assigned to teach all subjects to a class of students, the scientific method encouraged, if not demanded, specialization. Teachers could no longer be jacks-of-all-trades, but were constrained to specialize as science branched in all directions. In 1767 the tutors at Harvard stopped teaching everything to one class and began the teaching of one subject to all the classes (Rudolph, 1977).

New colleges like King's College and the College of Philadelphia in the 1750's were not patterned after the older colleges. They were free of curricular precedent and could offer practical courses of study. King's prospectus included navigation, geography, history, husbandry, commerce, government, meterology--"the knowledge of... everything useful for the comfort, convenience, and elegance of life"...(Rudolph, 1977). The College of Philadelphia had a 3-year curriculum designed by William Smith: Xenophon and merchant's accounts first year; second year, surveying, map making, and logic; third year, agriculture, history, and the vernacular. Electives were offered in the modern languages, as were fencing, military science, dancing. The College of Philadelphia was the first in the nation not to follow the

medieval curriculum nor have a religious intent (Walsh 209 and Rudolph 47).

The Revolutionary War made fundamental changes to the purposes of higher education and therefore to the old course of study. During the war and after, the states became more active in encouraging education at the universities for "useful " purposes--responsible citizenship and vocational preparation. Prior to the turn of the century, four states had state-chartered universities: North Carolina, Georgia, Tennessee, and Vermont. Columbia, the University of Pennsylvania, and Dartmouth were for a time state-controlled, and the secular interests of the state were increasing represented on the boards of Harvard, Yale, and William & Mary (Rudolph, 1962).

As state involvement increased, so did antipathy to the perpetuation of denominational interests. Conflicting interests culminated in the Dartmouth decision of 1819, which drew the distinctions between the autonomy of the private college and the will of the state. While the decision may not have caused the unrestricted proliferation of colleges that followed, it assured their autonomy. Whereas only nine colleges had been founded during the colonial era, hundreds of colleges sprang up between the Revolution and the Civil War, of which 182 survived (Boorstin, 1965; Tewksbury, 1965). The scores of colleges founded at this time believed in making cultural education accessible to all young men in a democracy, even if it meant the lowering of standards.

Despite the new context of pioneering boosterism and egalitarianism, the curricula of these western colleges surprisingly imitated the curricula of the eastern institutions. Despite proposals to expand the curriculum beyond the staples of the classics to include "useful" subjects, most professors and parents wanted Latin and Greek. These subjects were symbols

of an elite education and assisted, in a very pragmatic way, the social mobility of the graduates of the classical course. Moreover, the subjects that had utility were too expensive to offer because they required tutors who were specialists and purchasing experimental equipment (Church and Sedlak, 1989).

The conservatism in the curriculum was also a reflection of religious orthodoxy, which had begun to wrest back its control over American life. As America spread west across the continent, colleges became stays against barbarism and outposts of the Christian ministry, where every denomination could proselytize its own brand of salvation. Religious zeal, for example, motivated the founding of Oberlin College "for the common people" (Handlin & Handlin), whose presence was to neutralize the secular influences of the state universities. Another source of curricular conservatism may well have come from Yale College and its tradition of "Protestant Scholasticism"; Yale alumni had helped found sixteen colleges in the west, earning for their alma mater the epithet of "the mother of colleges" (Brubacher & Rudy, 1968).

It was Yale against which the students had rebelled in 1825, objecting to non-credit options that were excluded from the course of study. The rebellion followed a student riot at Harvard in 1823 over curricular reform. To investigate their policy on the study of "the dead languages", a committee was created to prepare a report on the educational plan of the college and the study of ancient languages (Rudolph, 1962). The report represents the first document on curriculum to attempt a philosophical rationale and to prescribe particular courses of action to support that rationale. It was a total defense of the classical curriculum and became a fortress against change. It had more far-reaching consequences than any document for almost

a hundred years.

The Report emphasized that the twin goals of a college education were to provide "the discipline (power) and the furniture (knowledge) of the mind." (Yale Report, 1828). It reaffirmed that ancient languages were indeed the most effective way to provide mental discipline, "the faculty psychology" or "mind as muscles," and to give a general liberal arts foundation--"models of taste"--for all professions. The uniformity of the curriculum was based on the knowledge that each man must know which provides the foundation for "all intellectual attainments."

The prescribed course at Yale, which would take four years, contained subjects that the college considered essential for a thorough foundation, to provide "liberal and comprehensive views." The Report also discredited the idea of the German university as a model for American students, who lacked maturity and sufficient intellectual training to enjoy the option of choice (Brubacher & Rudy, 1968). The undergraduate course was to give the principles of literature and science to the pre-professional prior to the specialized training he would receive after his basic education.

The Report defended its modes of instruction as appropriate. Both professors and tutors would continue to instruct as before: professors providing the experience and tutors, because of their youth, providing understanding of the students' habits. Yale defined its duties to include being a substitute for parental guidance because of the youth of the students (Yale Report, 1828).

Just two years after the Report, instruction at Yale and Harvard included the written biennial examinations. The colonial student had essentially been unexamined and the earlier

forms of examination at the colleges were oral. By 1865, there were course examinations--the bluebook--a practice that other colleges soon followed. Yale's four category grading scale of optimi, second optimi, inferiores (boni), and pejores became a 1-4 scale much as present day grade points are figured. Harvard used percentage grading 1-100 and then the letter grades A-E. Mt. Holyoke began the use of F instead of E (Levine, 1965; Rudolph, 1977).

The necessity for Yale's defense of its course of study marked a turning point. In the very year of the Report, the election of Andrew Jackson began an era of public hostililty toward the classical liberal arts colleges. The education afforded by the old curriculum was considered frivolous for unskilled young men who had neither inherited wealth nor social connections that could lead them to employment (Jencks, 1968).

Even prior to the signal year of 1828, the utilitarian spirit of the newly formed republic had manifested itself in the creation of the technical college or institution. Although technical instruction had been given in the latter part of the colonial era via some colleges the first technical institute in America was the US Military Academy, established in 1802 by the US Congress (Brubacher & Rudy, 1968). Civil engineering was central to its course of study. The curriculum introduced analytic trigonometry to the country, included chemistry, drawing, and required the study of the modern language of French because of its usefulness in scientific study. Instructional innovation also took hold at West Point. The students were grouped in classes according to ability and textbooks were up-to-date translations of European works (Rudolph, 1977).

The first indisputable technical college was established in 1824 at Troy, New York, through the benefaction of Stephen Van Rensselaer, who wished to provide the children of

farmers and mechanics instruction in applied sciences--husbandry, manufactures, and domestic economy. The total reverse of the view of education espoused by the Yale Report a few years later, the curriculum taught "the application of experimental chemistry, philosophy, and natural history to agriculture, domestic economy, the arts, and manufactures" (Brubacher & Rudy, 1968). The Rensselaer Polytechnic Institute emphasized agriculture until 1835, when civil engineering was added. It became a polytechnic institute in 1849 when it expanded its curricular offering to the training of architects, mining and topographical engineers and to develop the "physical and mental culture" of their students (Rudolph, 1962).

Rensselaer, like West Point, was innovative in its teaching methods. The students visited actual sites where applied science was employed, such as a tannery or a manufacturer, before they were engaged in laboratory experiments. They left the classroom to collect specimens, tour workshops, and survey. The institute made use of all the tools of the real world to become the first educational institution to provide field training as a systematic part of the curriculum. By 1850, the Institute expanded its course from one to three years, adding courses in natural science, civil engineering, and imported the latest technical education from France. There was an unprecedented emphasis on basic research in chemistry and physics (Ben-David, 1972; Rudolph, 1962).

Rensselaer had paved the way toward change for the rest of the century, even in the liberal arts colleges. As technology began to grow into an independent discipline, the liberal arts colleges responded by organizing departments or schools to accommodate the demand. President Eliphalet Nott of Union College established a department of engineering in 1845; two years later, Harvard affiliated with the Lawrence Scientific School and Yale, the Sheffield

Scientific School. The entrance requirements for these schools were notably lower than they were for the college, contributing to the prevailing opinion that they and their students were lower in intellectual quality. In 1852, Dartmouth established its Chandler Scientific School, and Brown created a department of practical science. In 1858, the University of Pennsylvania followed suit with a department of mines, arts, and manufactures (Brubacher & Rudy, 1968; Rudolph, 1962; Veysey, 1962).

In addition to the technical institutes, other types of specialized colleges developed. Women's colleges were slow to become established because the female seminaries were reluctant to assume the college role (Rudolph, 1962), and the New England states were most resistant to coeducation. The eventual founding of Vassar (1861), Smith (1875), and Wellesley (1875) offered women a curriculum that replicated what the men's colleges offered. Because of the fear in some quarters that the health of females would suffer under the intellectual strain of college, the curriculum put an inordinate emphasis on health, hygiene, and physiology (Rudolph, 1962). Vassar provided some electives in the cultivation of social graces and in home management and also developed strong programs in music and the fine arts. Shortly after its founding, Bryn Mawr offered advanced degrees, one of the first institutions that ignored gender distinctions in education and, together with Cornell and Vassar, developed courses in social work (Rudolph, 1977). In the eastern colleges, coeducation gave rise to the coordinate college: Radcliffe with Harvard, Barnard with Columbia, Sophie Newcomb to Tulane, Pembroke to Brown, Jackson to Tufts, and Flora Stone Mather to Western Reserve (Rudolph, 1962; Sack, 1962).

The real acceptance of women as bona-fide college students occurred in the land-grant

colleges and state universities, because western life necessitated an equality of the sexes and because the Morrill Act was an extension of education to both men and women (Brubacher & Rudy, 1968; Rudolph, 1962; Sack, 1962). Before long, however, home economics and domestic science became special women's programs, underscoring women's place as complementary to man's and elevating the role of housewife to a profession (Rudolph, 1962).

Negro colleges appeared following the Civil War, but the first institutions such as Hampton, Fisk, and Talladega were essentially secondary schools where basic education could be taught. In 1872, when laws were being passed limiting the rights of blacks and Northern interest in black education began to wane, Booker T. Washington, president of Tuskegee Institute, advocated vocational training for blacks. The second Morrill Act was also responsible for the founding of several black land grant colleges. The Act mandated that it would not support states that discriminated against admission of Blacks or refused to provide separate but equal educational facilities. Southern legislatues and departments of education insisted on keeping these institutions trade schools and prohibiting any liberal arts course. Liberal arts courses had to be disguised as trade courses before they would be allowed in the curriculum. For example, one state college offered Latin under the title of "Agricultural Latin." None of these land grant colleges provided college level work until 1916 partly through the efforts of W.E.B. DuBois, who began to protest the vocational emphasis of Negro education (Bond, 1962; Brubacher & Rudy, 1968).

In 1850 there was no institution that could train men to tend to the business of a growing nation--agriculture, manufacture, mechanics, merchandising--although there were colleges, law schools, and seminaries. The lack of such training brought a[illegible]icultural societies

and the press together to advocate "democracy's colleges" and the Morrill Act was passed in 1862. The Act would provide land and federal aid to agricultural and mechanical colleges (A & Ms), a unique product of the American system, and begin a tendency for federal support to determine the course of higher education (Ross, 1962; Rudolph, 1962).

The first land grant colleges were small in size and scope and consisted of little more than a few young men being given advice by a few local farmers and mechanics. In 1875, the curriculum at Kansas State reflected its humble beginnings: The Farm, The Nursery, Carpentry, Cabinet Making, Turning, Wagon Making, Painting, Blacksmithing, Scroll Sawing, Dressmaking, and Carving." Many other colleges followed the lead of the A & Ms in offering practical courses to remain competitive and to qualify for federal government subsidies. (Boorstin, Democratic, 1973).

The new institutions faced the hostility of American farmers who resented the theoretical and classical flavor of the curriculum they offered and instigated a financial review of the Morrill Act funds in California and Ohio in the 1870's. Many colleges hastily added short courses in practical aspects of farming to forestall any more criticism, what were the first extension courses in American higher education (Brubacher & Rudy, 1968).

With funding from the Morrill Act and the $500,000 gift of Ezra Cornell, the American university was created to provide, as Cornell himself intoned, "... an institution where any person can find instruction in any study." He wanted a trade school, but his president, Andrew White, envisioned both general education and professional training as being of equal merit. For the first time, courses were oriented toward specific vocations through the organization of nine departments: agriculture, mechanic arts, civil engineering,

commerce and trade, mining, medicine/surgery, law, and education. The ninth department, based upon one of White's fondest "principles," was public service, which included jurisprudence, political science and history. The first department of American history was established at Cornell in 1881 (Rudolph, 1977; Veysey, 1965).

Cornell offered a general course of study and three types of classical courses. There were a course for the natural sciences and a totally elective optional course. Military training stipulated by the Morrill Act and physical education were required. The university became a curricular model for other institutions, and the idea of public service became the purpose on which courses of study at land grant institutions and state universities were built (Rudolph, 1977; Westmeyer, 1985).

In its support of scientific instruction, the Act raised the prestige of the sciences. As science made startling advances, especially in its application, the scientific research method was emulated by disparate disciplines like literature and philosophy, which began to produce precise "data." Science, further abetted by professors trained in the German manner, made faculty specialization necessary and the curriculum, in turn, reflected a narrowing of subject area. No longer would there be chairs of instruction but faculty slotted into subject-matter departments. As courses proliferated, so did the number of specialized bachelor's degrees (Brubacher & Rudy, 1968).

As the US expanded into the West and as industrialization took hold, the demand for a more flexible, diversified curriculum was met by the elective system, which was to become the center of curricular struggle in the nineteenth century. In 1825, the elective system was evident at University of Virginia, where the student had total freedom of choice in attending

lectures and at Harvard, whose curriculum allowed choice from parallel courses (Brubacher & Rudy, 1968; Westmeyer, 1985).

The acceptance of the early elective experiments seem to have rested upon a curricular balance that allowed choice, practical application, or both. Brown University adopted a curriculum proposed by President Francis Wayland that offered wide choice, the expansion of applied sciences courses be expanded, and "lyceums," a kind of university extension service. In 1851, electives at the University of Michigan were focused too narrowly on specialized research, especially at the graduate level and not on vocationally directed courses; President Tappan was fired for these curricular "failings." The free-ranging elective system at Harvard endured despite a storm of criticism from Yale and Princeton about the loss of a core of education "that every man must have." The large state universities of the West and Midwest were more accommodating of the elective principle because of their foundational commitment to public service (Rudolph, 1977; Westmeyer, 1985; Veysey, 1965).

By the turn of the century, four systems involving electives had emerged. In one, the curriculum was composed almost entirely of electives, like Harvard's; in another, half prescribed and half elective; in the third, a major-minor system prevailed; in the fourth, the arrangement of electives into broad groups from which the student chose his courses (Brubacher, 1968; Levine, 1978; Westmeyer, 1985).

The curriculum was taken over by electives and given license to expand indefinitely, if chaotically. By 1901, a survey of 97 colleges showed 46 curricula that were 50% or more elective. In the absence of a hierarchy of subjects (Brubacher, 1968), the curriculum now included almost anything any professor was willing to teach. There were courses in

extracurricular activities at Columbia, police administration at Chicago, and electric wiring at Chapel Hill. Yale alone offered 554 courses to choose from. But the curricula had no uniformity in content nor in length or quantity. In 1900, the BA at Yale required 60 hours; at Harvard, 48-51. In 1906, 36% of Harvard students finished BA in three years and the fourth year was almost totally professional (Rudolph, 1977; Veysey, 1965).

The relative chaos of the elective system brought about a bureaucratic solution. At the University of Chicago, President Harper's curricular innovations were highly influential in the rationalization of higher education and the formation of the junior college. At Chicago, courses of study were divided into segments, every year into quarters, and every quarter into two six-week terms. The quarter system allowed in-depth concentration on two to three subjects. The division of subjects into "units" was a concept codified by the Carnegie Foundation for the Advancement of Teaching in 1906 which has since given higher education a national academic currency (Rudolph, 1977; Trow, 1988; Veysey, 1962). Thirteen years later by defining the American college, the National Conference Committee & the American Council on Education, in effect established the 120- semester hour requirement for graduation, recognized the department structure, and strenthened subject matter specialization (Rudolph, 1977).

Harper's undergraduate colleges were divided into junior and senior colleges to distinguish elementary subjects from those preparatory to graduate work. The University of Chicago awarded its first AA degree in 1899 in recognition of completion of the two-year course at the "junior college." By 1920, fifty-two junior colleges in the nation enrolled 8,000 students. After World War II, 500 colleges enrolled 250,000 students, an enrollment figure

that would double in 10 years. The President's Commission on Higher Education for American Democracy (1947) recommended that education through grade 14 should be as accessible as a high school education, tranforming the junior college into the mechanism for mass education (Brubacher & Rudy, 1968; Rudolph, 1977).

Harper's division of junior and senior colleges eliminated the difference between professional studies and liberal arts, liberalizing professional studies and professionalizing the liberal arts. The idea of early specialization was already gaining ground in an essentially pragmatist nation. Vocational courses became part of undergraduate study, and occupational programs were designed to lead to the BA. A three-year course of study with a fourth year of professional courses was referred to as the combined course. For example, Yale included a year of medical training and a year of law studies as part of the BA by 1903 (Rudolph, 1977).

Vocationalism filled the void left by the classics as the public became more influential in shaping the curriculum. Boards of trustees were no longer comprised of clergy but of leaders in commerce and industry. Courses proliferated in schools and departments of business across the country, following the model of the Wharton School at the University of Pennsylvania (1881). Courses such as metallurgy (University of Michigan), manual training (North Dakota), engineering English (Union), and journalism (Missouri) were newly offered in the first quarter of the century (Rudolph, 1977). Many colleges and universities had created departments of education for teacher training by 1900 (Levine, 1978). The BA became a catch-all degree for some colleges: Pomona offered landscape architecture; Whittier, YMCA work; the University of North Dakota, occupational therapy. In 1930, the state universities of

the North Central Association offered 46 types of baccalaureates as well as credentials to specific occupations (Rudolph, 1977). By 1970, there were 650 different types of bachelor's degrees (Levine, 1978).

The elective system still haunted the colleges with its lack of focus and led inevitably to the question of whether there was a body of knowledge an educated person should have (Jencks & Riesman, 1968; Levine, 1978; Miller, 1988; Rudolph, 1977). There were two approaches: the humanist and the instrumentalist (Miller, 1988). The humanist had a preference for the ancients' emphasis on temporal concerns vs. otherworldliness of the medieval writers and for the Enlightenment emphasis on reason. Chicago's core curriculum (1928-1947) and St. John's were based on the Great Books; Columbia offered Contemporary Civilization, which had begun as a course to help officers develop a system of values to deal with WWI (Jencks & Reisman, 1968; Rudolph, 1977;); in 1927 Wisconsin's Experimental College established the study of two civilizations, Greece and 19th century America as basis of his idea of "making minds" (Levine, 1978).

The instrumentalist approach emphasized the development of the relationship between individual and community in a contemporary democratic society using knowledge is a tool (Miller, 1988). Bennington's progressive education of 1932, for example, considered extracurricular activities and student governance all part of "GE," and Sarah Lawrence used the community as laboratory for general education. By 1926, over 100 courses in the general education category had appeared: forty-two were guidance, sixteen in how to learn, and thirty-four in aspects of contemporary civilization (Levine, 1978).

The concept of general education was reiterated in the 1945 publication of Harvard's

"Redbook," General Education in a Free Society. It defined general education as distinct from education for specialization and emphasized the legacy of the humanities and the natural and social sciences. It was also to help students think critically, communicate, make intelligent decisions, and weigh values. Its purpose was to develop the whole person and to relate the individual to society. Required courses included "Great Texts in Literature" and "Western Thought and Institutions." The rest of the program was to be filled with one course in the social sciences, one in humanities, and two in the sciences (Levine, 1978). Like the Yale Report of 1828, however, it represented a restatement of the status quo.

After World War II, the debouching of 2.25 million veterans into college via the 1944 Serviceman's Readjustment Act altered the idea to make it more compatible with mass education. President Truman's Commission on Higher Education re-emphasized general education but put a stamp of democratic obligation upon it. General education, which came to mean breadth rather than depth, appeared to be more instrumentalist than humanist. Its orientation was future-directed and pragmatic (Miller, 1988).

The post-war years, however, did little to change the basic liberal arts foundation of the general education requirement. Not until the 1960's were there any moves toward change: cries from the activist student generation called for relevance in the curriculum and a closer social application of theory (Best, 1989). Responsiveness to the youth culture resulted in courses in guitar and photography while world events brought Russian and Near Eastern studies on campuses (Rudolph, 1977). Classes were expected to address social concerns enveloped in a kind of Marxist twilight. "Relevance" was the operative word. In 1965, the University of California, Berkeley, responded with Joseph Tussman's Experimental College,

which utilized seminars and conferences focused on a reading list of great works rather than courses. The college failed after two years because, according to one historian, it did not allow sufficient student decision-making and faculty responsibilities were too heavy (Rudolph, 1977). It may have failed because it lacked practical instruction and flexibility in its reading list. The Berkeley students themselves formed the Free University, which dealt with highly theoretical political topics for a while until it deteriorated into community preferences for crafts and special interest themes such as gay studies and pastry-making (Levine, 1981).

The anti-establishment idealism of the students of the '60s could not be discerned in the curriculum of the '70s. The legacy of the previous decade was an institutional responsiveness to student consumerism. The curriculum now allowed even greater student autonomy, which led to at least partial abandonment of the traditional requirements (Best, 1989). The trend had already begun in this direction; earlier, in 1962, Harvard revisited its general education program and found it so eroded that the college decided to reduce its requirements and increase electives (Carnochan, 1993; Levine, 1981). A 1976 Carnegie Council study showed the the general education component in colleges decreased from 43% of courses taken in 1967 to 33.5% in 1974 (Blackburn, Armstrong, Conrad, Didham, & McKune, 1976). The National Longitudinal Study of the High School Class of 1972 generation gave evidence of the demise of the liberal arts curriculum. What Adelman (1992) calls the "empirical core curriculum" based on actual course-taking behavior shows that 45% or more of the undergraduates had taken the following courses in common: English composition, general psychology, introduction to sociology, general biology, and introduction to economics.

The dominance of the liberal arts curriculum gave way to vocationalism, opening the way for less traditional college-going populations at a time when enrollments were declining from the peak years of the '60s. New majors cropped up such as food service, police science, and computer science. Innovative curricula appeared that were more compatible with career training. In 1970, Technical Career Institutes, a proprietary school that offered fast, vocationally oriented, and highly specialized training in electronic technology was unique in its AA degree-granting status. At the New College at the University of Alabama the students planned their "contract" with a committee every semester and took interdisciplinary seminars focused on problem-solving. In 1972 both Metropolitan State University of Minnesota and Sterling College in Kansas offered an individualized competency-based curriculum (Levine, 1978). The greatest changes occurred in what might be termed as individualization, exemplified by work study, study abroad, community service, independent study--all of which had existed in some form prior to 1957 (Dressel, 1969).

Whether in professional-technical subjects or in the liberal arts, students were taking more courses in their majors in the mid 1970s than they had been in previous decades. Almost 80% of bachelor's degree programs required between 21 and 40% of the BA to be spent on the major. Almost 70% of the engineering bachelor's, however, required between 61 and 90% spent on the major and 87% of the health science programs required 41-90%. Fifteen percent of all undergraduates took a double major, which was offered at 30% of the four-year colleges, and might have been considered by students to be an additional advantage in creating more career choices. Elective choice overall declined 22%; students were putting that time into even more specialization (Levine, 1978). Blackburn (1976), however, saw an

increase in election opportunity. Institutions that had allowed 30% election in 1967 increased their allowance to 41% in 1974. Students were using electives to increase depth, not breadth by taking more courses in their major divisions.

The 1970s also saw an increase in basic skills courses, which most colleges and universities offered. In the previous decade, remediation had turned toward low-ability students who performed poorly. As a result, there were intensive math and English courses, counseling, Upward Bound (1965), and Special Services to Disadvantaged Students (1968), which provided students with instruction, counseling, and support services. By the 70's, remedial education had become compensatory; that is, students were taught new skills instead of being brought up to meet standards (Levine, 78). The distinction was largely one of institutional attitude, which became more flexible as the student body diversified in the wake of expanded educational opportunities.

Most colleges and universities offered some kind of instruction in basic skills and knowledge in English composition, reading, writing, and arithmetic. Fifty-two percent of two-year colleges offered credit and 83%, non-credit courses in the basic skills. Approximately half of the four-year colleges and universities offered basic skills courses, the liberal arts colleges offering far fewer than any other type of institution. Not surprisingly, 17% of all non-credit compensatory courses were taken by students at community colleges (Levine, 1978). In fact, the offerings in basic skills and English-as-a-Second-Language reflected the biggest portion of enrollment growth in California of the '90s, causing legislators to wonder if remediation was choking off other obligations of the community college system. At the same time, the non-credit skills programs at the California universities were apparently

being phased out, probably a fatality of state budget downsizing. In 1994 at the University of California at Los Angeles, only one "preparatory" course remained: Chemistry 17, which enrolled 186 students. The preparatory math course UCLA once offered, intermediate algebra, was relegated to University Extension and English A was discontinued a year before.

In the mid-sixties, Clark Kerr (1991) saw that the emphasis in the universities was shifting to the training of professionals. Not only were the established professions needful of recruits, but other, newer professions were formalizing their training, such as business and social work. The professions were crystallizing their identities by using higher education as "the port of entry" and assisted the metamorphosis of the curriculum.

Two of the most popular professional courses exemplified this shift: business and engineering. Business schools began their rise to prominence after World War II, aided by the GI Bill and the immediate growth in the college-going population. In 1947, the Ford Foundation discovered that one out of every seven students--most of them male--was enrolled in a business program. Years later according to the National Longitudinal Study of the High School Class of 1972, students took the largest percentage of undergraduate courses in business administration and management in the non-selective institutions (Adelman, 1992). The business major made significant inroads into the undergraduate curriculum. By the junior year, an area of specialized study within the business course had to be selected--finance, marketing, personnel, etc. Even more education became attached to business subjects. The accounting profession began to require about five years of education before CPA certification, and the MBA became another badge of distinction for the business graduate, with greater selectivity assured by the Graduate Management Admissions Test (Grambsch, 1981).

Like the business school, engineering schools also grew after World War II but in response to military demands of the war and to advanced techology demands of the Korean War. Eight to ten percent of the post-war student body sought a major in engineering. The number of engineering courses taken ranked high in the 1970s and '80s: they were the eighth most frequently taken courses of all undergraduate offerings at selective institutions and sixth at highly selective ones (Adelman, 1992). In 1955, the Grinter Committee recommended significant changes in the engineering course to include a core of mechanics, thermodynamics, electronics, and higher mathematics, among other requirements. Schools of engineering complied and the resultant curriculum consisted of 140 to 160 semester hours and five-year programs of study (Griffith, 1981), turning the undergraduate curriculum into virtual professional schools.

Along with the professional training provided by the four-year colleges and universities came the need for support occupations or semiprofessional training. In the absence of programs at the four-year institutions, such training became the purview of the community colleges. In the 1960's, enrollments in career courses outpaced the liberal arts due in part to the support of the Vocational Education Act of 1963. Federal funding of the community colleges greatly increased with the 1968 and 1972 amendments to the Act; through the Carl Perkins Vocational Education Act of 1984, $174 million was being appropriated to community colleges. In Illinois, for example, 66% of all curricula were occupational; in Florida, there were more than 200 certificate and associate degree programs. In 1985, 72% of all community college curricula were occupational, up 30% from 1970. Enrollment growth depended upon job markets: business, health professions, engineering

technologies, and computer science were among the most popular programs (Cohen, 1991). In 1994, the demand for occupational training in California was greater than collegiate supply because of the reluctance of the state to allocate sufficient funds for growth or even maintenance (McCurdy, 1994).

Critics of the "vocational trend" say that it has caused the diminishing of the prestige of the disciplines and has compromised the intellectual goals of higher education (Geiger, 1980). Adelman laments that it is possible for a college graduate not to have taken history, American literature or a foreign language (1992), and, indeed, the curriculum has been so far transformed from its colonial avatar that a student can now avoid taking any of the classics. This should not be surprising. According to Rudolph (1977), the content of the undergraduate curriculum is completely revised every twenty-two years; old courses leave at rate of 5% per year, new ones are created at 9% per year. The irony of these objections to the state of the curriculum is that they ignore the historical constants of utility and change. The colonial curriculum was intended as vocational training for ministers, and the curriculum has always felt--and accommodated--the pragmatic tug of vocations in every era; history, literature, and foreign language once had to fight their way into the American curriculum; and the students of science, who are now the intellectual elite, were once banned from attending chapel with the rest of the young men at Yale (Rudolph, 1962).

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